

ABSTRACT FOR THE Spring AGU 2001, Boston, 29 May – 2 June 2001
Submitted to: P01 Galileo and Cassini at Jupiter: an Historic Two-Spacecraft Experiment

The Flyby Of Jupiter By *Cassini/Huygens*

D. L. Matson (1), J.-P. Lebreton (2)

(1) Jet Propulsion Laboratory, California Institute of Technology, (2) Space Science
Dept. of ESA, ESTEC

The *Cassini/Huygens* spacecraft is flying to Saturn in order to carry out an in-depth exploration of Titan and the Saturnian system. *En route* it has already flown by Venus (twice), the Earth, and Jupiter. The closest approach to Jupiter was on December 30, 2000. The weeks surrounding closest approach were a busy time for *Cassini*. Data were being collected to study: • Jupiter's atmospheric composition and dynamics, including the aurora, and heat flow, • Jupiter's rings, • Europa and Callisto with observations exactly at opposition, • Himalia's rotation period, • Io in eclipse, • the interaction of Jupiter's magnetosphere with the solar wind, • Io's dust stream, and • Jupiter's synchrotron radiation. Collaborative studies are also being carried out jointly with the Galileo spacecraft which has been orbiting Jupiter for the last five years. Instruments in Earth-orbit and on the ground are also involved in the collaborative observing efforts.

This talk will present an overview of the *Cassini/Huygens* flyby of Jupiter and provide context and perspective for the status reports that are being presented at this meeting, some one hundred and twenty days after the completion of flyby activities.

The Cassini mission is a joint undertaking by NASA and ESA, with ASI as a partner via a bilateral agreement with NASA. The JPL portion of this work has been carried out under contract with NASA.